



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

P-Channel Silicon MOSFET

SFT1350 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)1}=45m\Omega$ (typ.)
- 4.5V drive
- Input Capacitance $C_{iss}=590pF$ (typ.)
- Halogen free compliance

Specifications

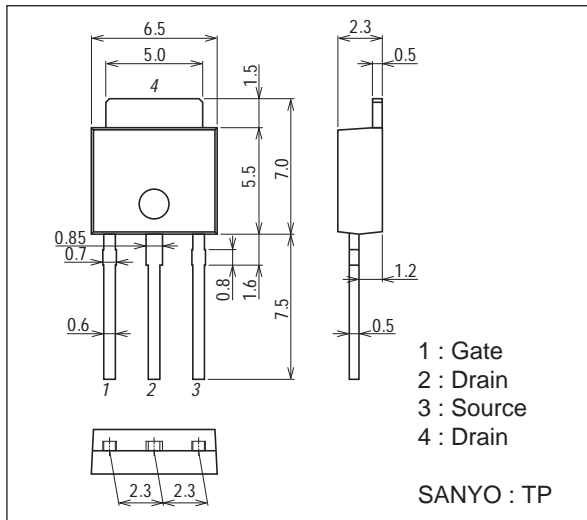
Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-40	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-19	A
Drain Current ($PW \leq 10\mu s$)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	-76	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c=25^\circ C$	23	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions

unit : mm (typ)

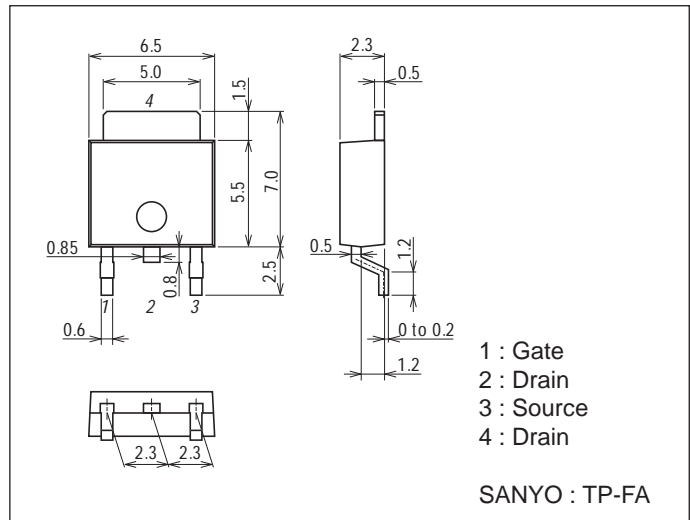
7518-004



Package Dimensions

unit : mm (typ)

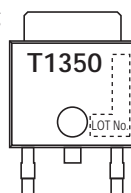
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Product & Package Information

- Package : TP
- JEITA, JEDEC : SC-64, TO-251, SOT-553, DPAK
- Minimum Packing Quantity : 500 pcs./bag

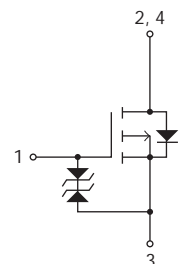
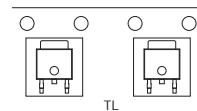
Marking(TP, TP-FA)



Product & Package Information Electrical Connection

- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252, SOT-428, DPAK
- Minimum Packing Quantity : 700 pcs./reel

Packing Type(TP-FA) : TL



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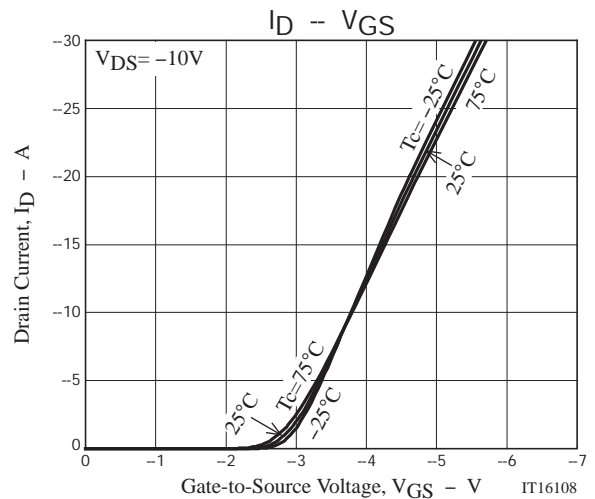
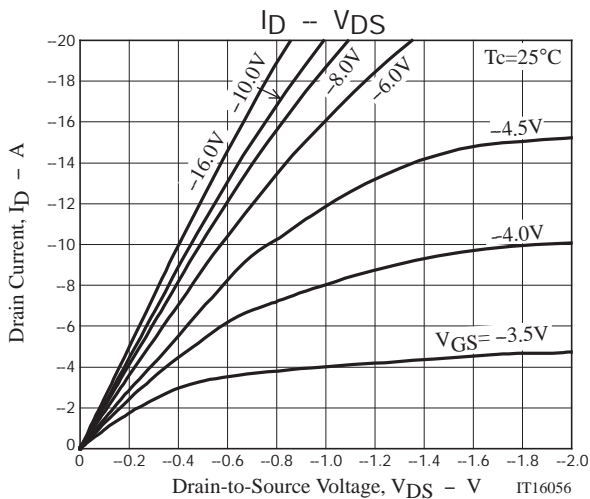
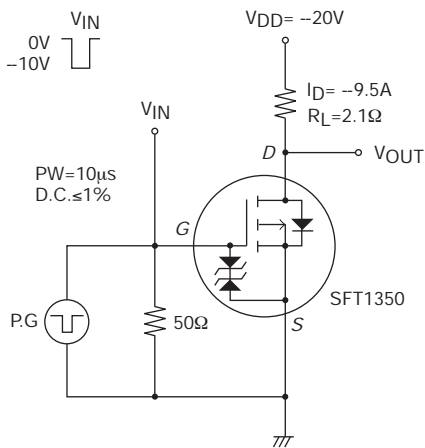
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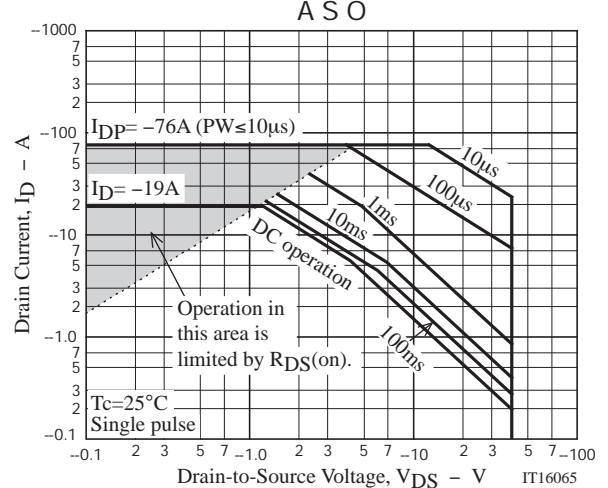
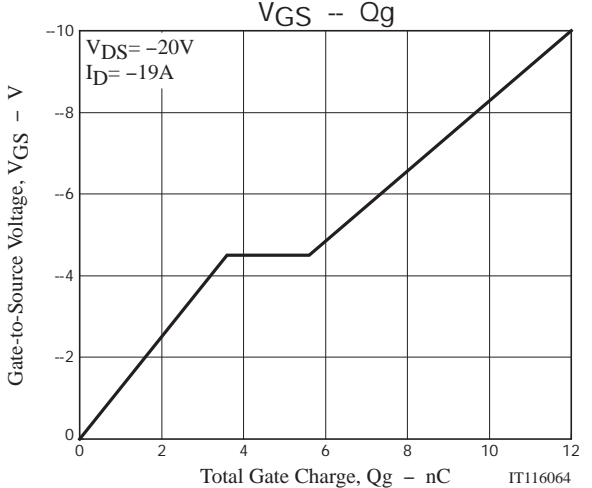
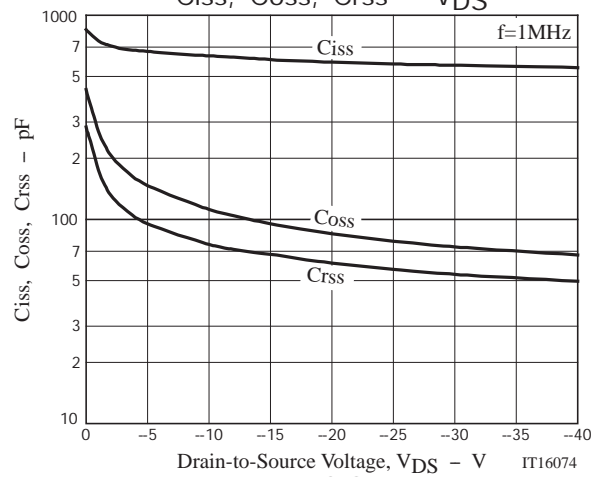
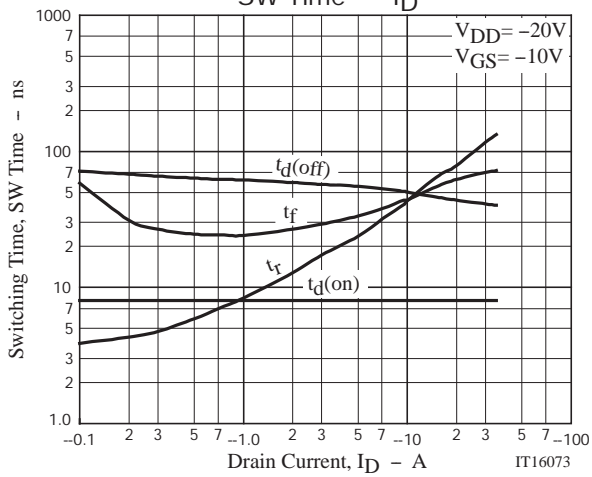
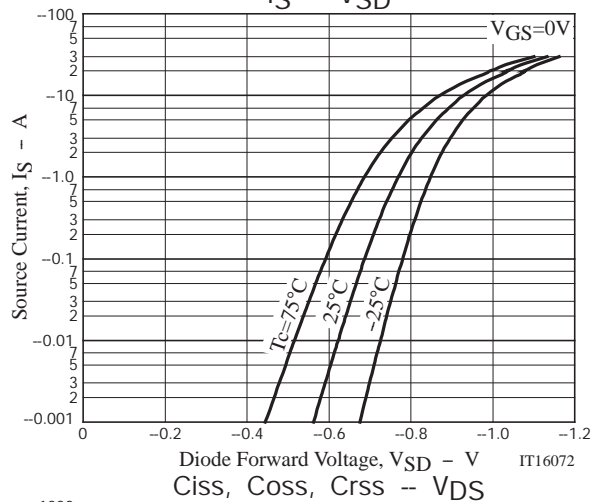
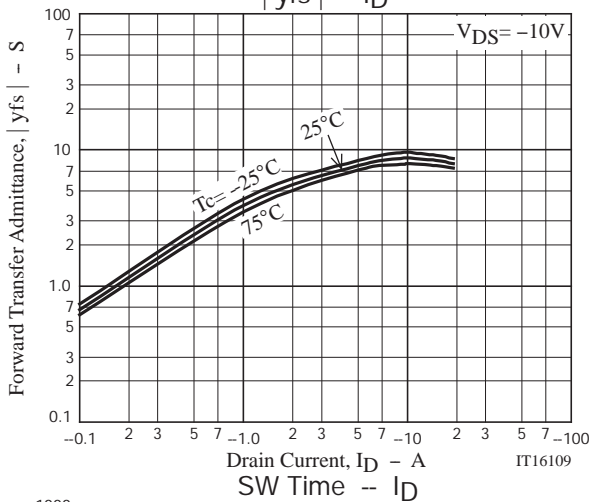
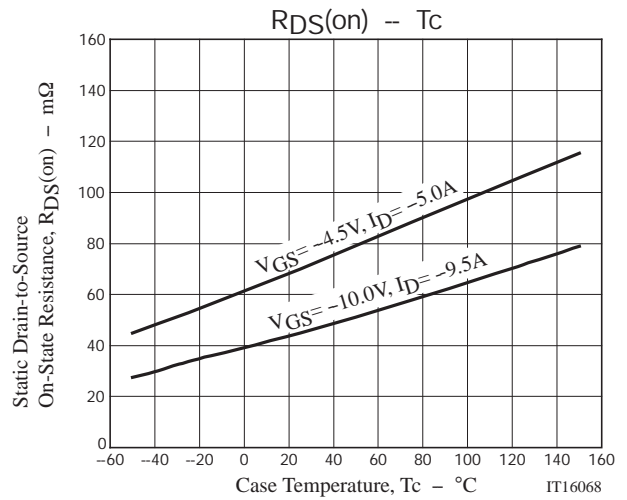
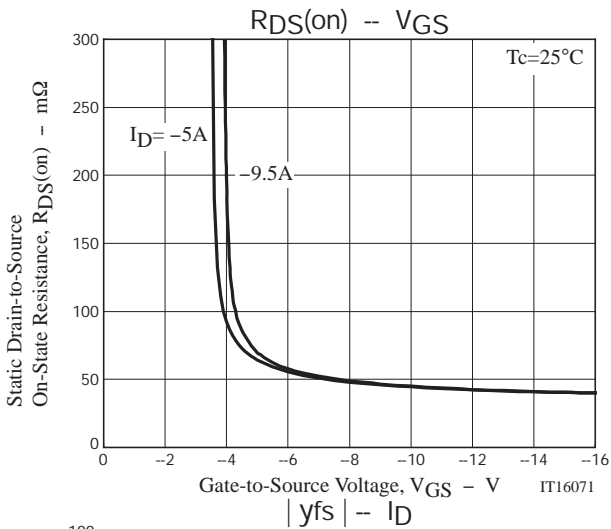
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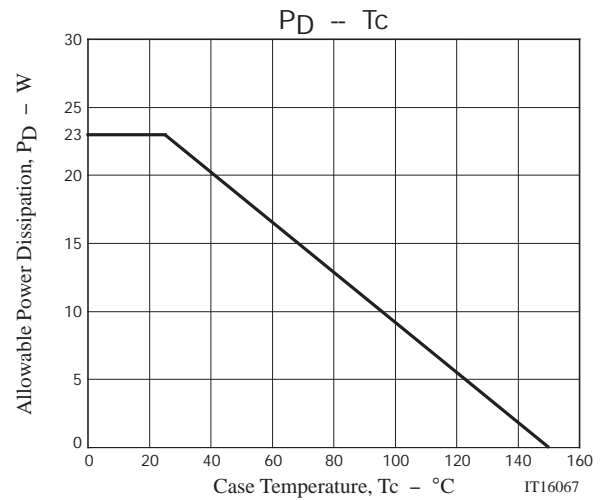
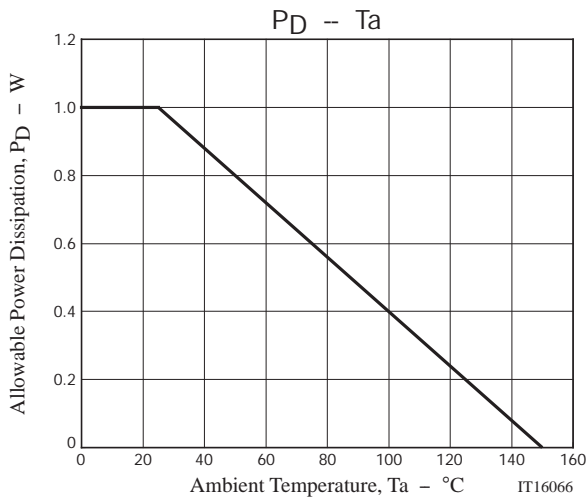
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}, V_{GS} = 0\text{V}$	-40			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -40\text{V}, V_{GS} = 0\text{V}$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}, V_{DS} = 0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.7		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}, I_D = -9.5\text{A}$		8.7		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -9.5\text{A}, V_{GS} = -10\text{V}$		45	59	$\text{m}\Omega$
	$R_{DS(on)2}$	$I_D = -5\text{A}, V_{GS} = -4.5\text{V}$		73	105	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		590		pF
Output Capacitance	C_{oss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		85		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$		61		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		8		ns
Rise Time	t_r	See specified Test Circuit.		40		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		52		ns
Fall Time	t_f	See specified Test Circuit.		44		ns
Total Gate Charge	Q_g	$V_{DS} = -20\text{V}, V_{GS} = -10\text{V}, I_D = -19\text{A}$		12		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -20\text{V}, V_{GS} = -10\text{V}, I_D = -19\text{A}$		3.6		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS} = -20\text{V}, V_{GS} = -10\text{V}, I_D = -19\text{A}$		2.0		nC
Diode Forward Voltage	V_{SD}	$I_S = -19\text{A}, V_{GS} = 0\text{V}$		-1.03	-1.2	V

Switching Time Test Circuit







Note on usage : Since the SFT1350 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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